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**MASTER OF MILITARY STUDIES**

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**TITLE:**

History's Role in Operational Design and Planning: How Germany's Failed Invasion Provides Insight into US and Chinese Perspectives on A2AD

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## Executive Summary

**Title:** History's Role in Operational Design and Planning: How Germany's Failed Invasion Provides Insight into US and Chinese Perspectives on A2AD

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**Thesis:** The 1940 battle space between Germany and Great Britain provides a different design perspective for the US A2AD problem. Germany's struggles during Operation SEALION provide insight into China's attitude towards strategy, unrestricted warfare, PLAAF and PLAAN A2AD challenges, and ethnic ties with Taiwan. These insights offer warfighters a different context to understand *Air Sea Battle's* focus on defeating China's A2AD umbrella from within, not penetrating into it from the outside.

**Discussion:** The 1940 battle space between Germany and Britain provides the most accurate case study to understand the design behind the *Air Sea Battle Operational Concept* and Chinese perspectives on strategy, unrestricted warfare, A2AD challenges, and ethnic brotherhood. Germany used air power to wage unrestricted warfare against Britain using strategic isolation, economic warfare, network warfare, and terrorism. Second, it tried to solve an A2AD problem with air power to make up for a lack of air and naval supremacy. Third, German leaders grappled with conflicts between ethnic brotherhood and strategic end states. While technology has changed many of the methods of attack, China will wage a remarkably similar existential war against the US. Additionally, China maintains a current A2AD problem almost identical to that of Germany in 1940.

**Conclusion:** This examination reinforces just how significant a role history plays in operational design and planning. Case studies not only start the creative process to understand the problem. Additionally, case studies provide a frame of reference for outsiders to understand a finished operational plan. Designers and planners must pick case studies carefully in each instance. This examination shows that while War Plan Orange helped start the design process, Germany's failed invasion provides the best case study to communicate the final plan.

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The *Air Sea Battle* Operational Concept addresses the US problem of Anti-Access Area Denial (A2AD) against China in the Western Pacific. While the concept appears to counter China's strategy and operational capabilities, it cites the World War II Pacific Theater as a context to understand its design. The 1940 battle space between Germany and Great Britain provides a different design perspective for the US A2AD problem. Germany's struggles during Operation SEALION provide insight into China's attitude towards strategy, unrestricted warfare, PLAAF and PLAAN A2AD challenges, and ethnic ties with Taiwan. These insights offer warfighters a different context to understand *Air Sea Battle's* focus on defeating China's A2AD umbrella from within, not penetrating into it from the outside.

This examination will begin with a brief look into operational art and how historical case studies play a significant role in the operational design and planning process. Next, it will briefly describe *Air Sea Battle* and examine how misapplied historical case studies can undermine a warfighter's understanding of *Air Sea Battle's* design and plan. Finally, it will provide an alternative design perspective through the lens of German and Chinese strategy, unrestricted warfare, A2AD, and ethnic brotherhood.

### *The Role History Plays in Operational Design and Planning*

Operational design precedes operational planning. Operational design focuses on understanding the nature of the problem first. This ensures that the subsequent operational planning effort generates solutions to the actual problem.<sup>1</sup> Joint Pub 3-0 defines operational art as "the application of creative imagination by commanders and staffs - supported by their skill, knowledge, and experience - to design strategies, campaigns, and major operations and organize

and employ military forces.”<sup>2</sup> When applying operational art, operational planning teams (OPTs) can use historical case studies during the first step of operational design: the collaborative learning process.<sup>3</sup> These studies provide alternative ways of understanding why problems exist and how they behave in the environment. Liddell Hart emphasized this point well when he wrote in *Why Don't We Learn from History* “there is no excuse for any literate person if he is less than three thousand years old in mind.”<sup>4</sup>

While history maintains a significant role in these processes, operational designers and planners must not take the adage “history repeats itself” too literally. Instead, operational design and planning teams should use historical case studies to add value to collaborative learning and not attempt to solve the problem with a historical solution. Misapplying history constitutes as serious an error as ignoring history. Sometimes the misapplication of history occurs unintentionally. For example, an operational design and planning team may use a specific historical case study to initiate problem framing only to solve the problem using a different approach all together. If the team subsequently uses the historical case study to communicate the plan, the people outside of the design and planning process may misunderstand the problem, environment, and mission.

### *Air Sea Battle: The 21<sup>st</sup> Century War Plan Orange?*

The Center for Strategic and Budgetary Assessment (CSBA), a think tank integrally involved in [Air Sea Battle's] creation, published a document in 2010 entitled *Air Sea Battle: A Point of Departure Operational Concept*.<sup>5</sup> Through *Air Sea Battle*, the US Department of Defense (DOD) recognizes the existential nature of the Chinese threat. First, the concept “sets



the conditions at the operational level to sustain a stable, favorable conventional military balance throughout the Western Pacific region.”<sup>6</sup> Second, it unpacks the existential nature of the Chinese threat by detailing how China’s grand strategy of unrestricted warfare will affect US treaties and legal obligations and “like strategic aerial bombardment”, include economic and network attacks that terrorize the US population.<sup>7</sup> Third, *Air Sea Battle* accurately identifies how China threatens critical requirements of US military strategy that have up to now, remained safe since World War II.<sup>8</sup> Fourth, *Air Sea Battle* matches China’s focus on dominating the information domain. Lines of operation target PLA networks and seize the initiative in the air, sea, space, and cyber domains.<sup>9</sup> Finally, *Air Sea Battle* makes the correct assumption that China’s strategy looks to “achieve its strategic objectives and end hostilities as rapidly as possible before US forces could regroup and seize the initiative.”<sup>10</sup>

While *Air Sea Battle* accurately describes the battle space and the actors within it, the concept cites the Imperial Japan’s World War II A2AD framework as the case study for historical comparison. Some similarities exist. For instance, the expanses of the Pacific will form the same logistical obstacles the US faced during the Pacific Campaign. This begs the question: does the design of *Air Sea Battle* originate from War Plan Orange, the US World War II Pacific Theater Operational Plan that defeated the Japanese A2AD threat? After all, at its zenith, Japan’s defensive perimeter extended thousands of miles east into the Pacific.<sup>11</sup> This compares closely with *Air Sea Battle*’s design focus on China’s A2AD threat, which in the future may extend 1500 NM from the Chinese mainland.<sup>12</sup> An almost identical question recently surfaced in the US media: “does [Air Sea Battle] constitute a 21st century War Plan Orange...with a new focus on war with China instead? Or is it simply a new approach to integrating military assets and communications technology?”<sup>13</sup>

Most likely, operational designers began their collaborative learning process in the context of the World War II Pacific Campaign because it remains the largest multiple warfare domain engagement the US has faced in the Pacific region. Unfortunately, while this historical case study initiated the creative journey that successfully designed *Air Sea Battle*, it now convolutes the concept's meaning. Warfighters need to know how a war with China will look, sound, and feel. Should a Sailor think of the Battle of Midway? Should a Soldier think of the campaign to retake the Philippines? Should a Marine think of invasion of Iwo Jima? Should an Airman think of bombing raids over Tokyo? While these examples provide enduring mental images of war, they took place during a Pacific Campaign that took years to evolve. Consequently, War Plan Orange runs counter to *Air Sea Battle's* overriding theme: high tempo operations in a congested battle space. The fight with China will end as quickly as it starts; there will be no time for a sequential island hopping campaign. There will be no time for a slow build-up of forces, constrained by a "Europe First" mentality. A more accurate perspective lies in Germany's failed invasion of Britain.

While technology has shrunk time and space, operational designers cannot refight 1940, replacing German and British actors and technologies with Chinese and US modern counterparts. A German ME-109 restricted to 10 minutes of dog-fighting over London will not equate to a Chinese J-11 restricted to 10 minutes of afterburner usage during beyond-visual-range (BVR) engagements. A German JU-87 *Stuka* dive bombing a British motor-torpedo boat (MTB) will have a different effect on the battle space than a Chinese DF-21 anti-ship missile targeting a US Carrier Strike Group (CSG). Germany's artillery batteries pummeling Dover from the Pas de Calais will have a different operational impact than China's Second Artillery Corps launching a first strike on Taiwan and the region at large. Lastly, a Fighter Command Sector Station

scramble will not compare perfectly to the alert launch of an F-22 Defensive Counter Air (DCA) division.

This examination will not attempt to make as many direct comparisons as possible. While interesting, broader themes provide more value to collaborative learning in operational design. This examination into the 1940 battle space only attempts to assist in the basic understanding of the legacy and current systems surrounding Chinese strategy, unrestricted warfare, A2AD challenges, and ethnic ties with Taiwan.<sup>14</sup> This new perspective will help warfighters understand China's frame of reference on these issues and reinforce *Air Sea Battle* in a more accurate historical context.

#### A German Perspective on Strategy, Unrestricted Warfare, A2AD Problems, and Ethnic Brotherhood

A "paradoxical" grand strategy plagued Germany during World War II.<sup>15</sup> "Tactics, as Clausewitz had proposed, 'is the art of using troops in battle; strategy is the art of using battles to win the war.'"<sup>16</sup> Up through 1938, Hitler carefully chose his adversaries and achieved brilliant diplomatic triumphs. The *Wehrmacht* believed that Germany's strategy, at least prior to Operation Barbarossa in the early summer of 1941, continued the Prussian / German military tradition started under Frederick the Great. This meant fighting "total wars for limited aims and applying the maximum force possible within a framework established and controlled by the statesman."<sup>17</sup> Germany's "Blitzkrieg" tactics blossomed under this framework and succeeded in dominating neighboring countries in all warfare domains in order to bring about rapid victory.

Hitler broke away from the tradition of “total wars with limited aims” when France and Britain declared war on Germany after the invasion of Poland in 1939. “For the first time in their history, Germany’s armed forces performed in the context of a system deliberately unlimited in its seeking of enemies.”<sup>18</sup> Germany lacked a cohesive security strategy that could solve problems regarding core national interests without making war. “German grand strategy was ultimately [just] a military strategy.”<sup>19</sup> To make matters worse, German military strategy stopped at the operational level. “The development of operational strategy became an end in itself, a process that discouraged serious thought about what happened next.”<sup>20</sup> This led to the *Kriegsmarine*’s failed strategic naval campaign. It also contributed to the *Luftwaffe*’s disjointed strategic and tactical operations targeting Britain’s capacity to wage war. While Germany had the means to execute unrestricted warfare, it lacked the strategic vision to achieve a unity of effort to reach one of the desired end states: British capitulation.

Strategic isolation, economic warfare, network warfare, and terrorism constituted components of Germany’s unrestricted warfare aimed at Britain in 1940. In terms of strategic isolation, Britain remained the only nation at war with Germany by the end of June, 1940. At this time, France had capitulated, and areas of southern France and colonies in North Africa formed the Vichy Government, a neutral state unwilling to fight Nazi aggression. Second, Italy began posturing itself for offensive operations in the Mediterranean against Britain. Third, Rumania, Bulgaria, Hungary, and Yugoslavia began aligning with the Axis. Fourth, Germany dominated Scandinavia through an occupation of Norway and iron ore agreements with Sweden. Finally, Hitler neutralized the threat of the Soviet Union with a non-aggression pact. To add to this bleak diplomatic landscape, the British Expeditionary Force (BEF) evacuated at Dunkirk while the Royal Navy divided itself to defend possessions in Southeast Asia and the Mediterranean while

defending the homeland at Scapa Flow. Lastly, Fighter Command repaired extension battle damage suffered during the Battle for France.

To exploit Britain's strategic isolation, Germany attacked with three campaigns. First, u-boats and surface raiders of the *Kriegsmarine* conducted a strategic naval campaign. Climaxing in 1941, this campaign focused on starving the British economy and people. Second, the *Luftwaffe* conducted both a strategic air campaign and a tactical air campaign, remembered as the Battle of Britain. The *Luftwaffe* sought to prepare the battle space of Southern England for a German amphibious invasion known as Operation SEALION. The tactical air campaign attempted to establish air supremacy by destroying the Royal Air Force (RAF) and also promised to support the *Kriegsmarine* and *Wehrmacht* during the invasion. When the *Luftwaffe* failed to destroy Fighter Command by the end of September, only the strategic air campaign remained. Remembered as the "Blitz", *Luftwaffe* bombers wreaked havoc on London until early 1941. While Germany failed to synchronize these separate campaigns to force British capitulation, this period tested Britain's economy, infrastructure, military, and resolve.

Economic warfare provided the second component of unrestricted warfare used by Germany against Britain. German plans to invade England began in late 1939 with independent studies carried out by the *Kriegsmarine* and the *Wehrmacht*.<sup>21</sup> Meanwhile, Goering, head of the *Luftwaffe*, advocated using only air power to conquer England.<sup>22</sup> Quickly, Germany's lack of naval supremacy shaped a Concept of Operations (CONOPS) that used u-boats and the *Luftwaffe* in a combined strategic campaign to knock Britain out of the war.<sup>23</sup> Hitler believed "the concentration of naval and air warfare against the British economy will come to the fore as the most effective means of defeating [England.]"<sup>24</sup> Fortunately for England, the German High Command (OKW) never synchronized the naval and air strategic campaigns with the tactical air

campaign.<sup>25</sup> Consequently, the amphibious invasion of England never materialized.

Additionally, improvements in the Allied convoy escort system ensured Britain's survival for the remainder of the war.

The third component in Germany's unrestricted warfare focused attacks on British network infrastructure. Today, network warfare includes attacks on data-exchange, transportation, financial institutions, and communication. One of the many lines of operations of Germany's strategic air campaign against Britain focused and sustained attacks on the network infrastructure of 1940: cities, industrial centers, and merchant convoys supplying coal, machinery, raw materials, and food stuffs.<sup>26</sup> Goering, the architect of the air campaigns, "subscribed to the theories of General Giulio Douhet, an Italian who believed that armies and navies were best employed as defensive forces while bomber fleets conquered the enemy."<sup>27</sup> Goering believed that pressure brought on by the civilians suffering the *Luftwaffe's* onslaught would result in Britain's capitulation. As a result, the majority of the *Luftwaffe's* time and resources targeted infrastructure.

Terrorism provides the final piece to Germany's unrestricted attacks on Britain. Terrorism requires an audience, a narrative, and a mechanism to induce terror. In 1940, British civilians became the audience and capitulation constituted the narrative. Finally, the *Luftwaffe* provided Germany's mechanism to induce terror. Goering, using Douhet's theories, targeted the British civilians' "Sangfroid" or will to fight as the center of gravity.<sup>28</sup> To destroy their will, Goering attempted to undermine the civilian's belief in the historical precedent that being an island made Britain impervious to invasion.<sup>29</sup> Goering believed that air power nullified the defensive value of the English Channel.<sup>30</sup> Although British civilians hastily prepared defenses, suffered psychologically, and grappled with societal friction, they carved out an indestructible

existence.<sup>31</sup> Furthermore, British Prime Minister Winston Churchill never stopped receiving support to continue the war against Germany.<sup>32</sup>

Germany's A2AD problem against Britain predicated air power as the solution. Germany's A2AD solution required two objectives: the *Luftwaffe's* destruction of Fighter Command and the neutralization of the Royal Navy. Only then could German u-boats, surface combatants, mine fields, and artillery barrages finish preparing the battle space for a German amphibious assault. Meeting these objectives proved difficult. During the pre-war years, the *Luftwaffe* did not develop to sustain long-range strategic air campaigns. Instead, Germany's air force quickly expanded in order to conduct short range interdiction operations or joint operations in conjunction with *Blitzkrieg*. Operation SEALION required the *Luftwaffe* to expand its capabilities in order to establish German air supremacy over Southern England and neutralize British naval supremacy.<sup>33</sup> For this expansion to occur, Goering and the rest of the *Luftwaffe* leadership had to accomplish three tasks: understand the limits of German aircraft, shape a phased tactical air campaign with enough time and resources to achieve its objectives, and create a unity of effort with the *Kriegsmarine* and *Wehrmacht* to conduct an amphibious operation. In the following analysis of the air, sea, and land domains, Goering and the *Luftwaffe* leadership failed in these three tasks.

The air domain constituted Germany's most powerful solution to their A2AD problem against Britain. Germany possessed the most modern air force in the world in 1940. However, the *Luftwaffe* had never faced an advanced adversary during the *Condor Legion* operations in Spain or during the air campaigns supporting the conquests of Poland, Scandinavia, and Western Europe. Likewise, the *Luftwaffe* never fought an adversary that maintained immunity to the *Wehrmacht's* "Blitzkrieg." Mass production of the MK1 Spitfire and Hurricane flooded Fighter

Command's squadrons. Meanwhile, Air Chief Marshal Sir Hugh Dowding constructed a resilient network of RADAR stations, observer corps, artillery, and Sector Stations in order to ensure the most efficient and effective employment of Fighter Command's most precious resource: trained pilots.<sup>34</sup>

Blinded by Douhet's Theories, Goering divided his time and resources between two distinct focuses. First, he maintained a strategic focus targeting Britain's economy, network infrastructure, and civilians. Next, he maintained a tactical focus targeting Fighter Command and the Royal Navy.<sup>35</sup> The competition between the strategic and tactical campaigns wasted valuable resources and time. Had Goering understood the *Luftwaffe's* limits, he may have understood how little time he had before the invasion window ended. An understanding may have forced Goering to focus resources into a single campaign with the objective to destroy Fighter Command and neutralize the Royal Navy.

As it happened, Goering never committed enough time and resources to a tactical campaign whose mission focused on destroying Fighter Command. The *Luftwaffe's* focus on airfields constricted itself to just a two week period from 24 August to 6 September. During this period, the *Luftwaffe* destroyed 295 RAF fighters and badly damaged 171 against a total output of 269 new and repaired Spitfires and Hurricanes.<sup>36</sup> During August, the RAF turned out 260 new pilots while casualties exceeded 300.<sup>37</sup> Had this pace continued for three more weeks, the *Luftwaffe* could have broken Fighter Command. Fortunately for Britain, Goering ordered the *Luftwaffe* to shift focus from Fighter Command's airfields to London on September 7<sup>th</sup>. While this period brought destruction to London, it saved Fighter Command, denied the *Luftwaffe* air supremacy over Southern England, and forced the ultimate cancellation of the invasion.<sup>38</sup>



In terms of the sea domain, Germany's A2AD problem required two solutions. First, *Luftwaffe* operations to attrite the Home Fleet as it traveled from Scapa Flow to the Channel. Next, mining and u-boat operations to block the Home Fleet's access to Germany's invasion barges. Unfortunately for Operation SEALION, Goering's mismanagement of the tactical air campaign against Fighter Command meant the cancellation of follow-on *Luftwaffe* operations to neutralize the Royal Navy. Had these operations happened, a lack of armor-piercing bombs and aerial torpedoes would have forced the *Luftwaffe* to commit significant time and resources to deny the Royal Navy access to the English Channel.<sup>39</sup>

The second effort in the sea domain focused on *Kriegsmarine* operations. Prior to Operation SEALION, Grand-Admiral Raeder, head of the *Kriegsmarine*, focused on a strategy of surface raider and u-boat operations to knock Britain out of the war. Operation SEALION put Raeder's strategy on hold while he formed a fleet of barges to transport the *Wehrmacht*. The invasion of Norway decimated the *Kriegsmarine* with surface fleet losses. Consequently, the *Kriegsmarine* only supported a planned amphibious invasion along a narrow front with a slow rate of troop debarkation and resupply.<sup>40</sup> The CONOPS planned on mine fields for protection along the west and east flanks of the landing area. In addition, the *Kriegsmarine* deployed an outer screen of destroyers, motorized torpedo boats (MTBs), and u-boats to intercept the Royal Navy. Finally, the *Kriegsmarine* planned for a deception plan involving decoy invasion fleets in order to confuse the Royal Navy and buy time for the vulnerable crossing in the English Channel.<sup>41</sup> The plan included one deception operation to Iceland and another to Scotland.

The land domain provides the final piece to Germany's A2AD problem against Britain. Operation SEALION's CONOPS did not take shape until July 12<sup>th</sup> when General Alfred Jodl, Chief of the *Wehrmacht's* Operations Staff, wrote a memorandum to the OKW. This

memorandum laid the foundation for Hitler's Directive 16. Hitler expressed awareness to the difficulty of an amphibious invasion. He also believed "that a country could not be defeated by the Air Force alone."<sup>42</sup> As a result, the CONOPS used both the *Kriegsmarine* and the *Luftwaffe* as the main effort to paralyze Britain's economy and gain air supremacy.<sup>43</sup> Once Britain showed signs of collapsing, only then would the amphibious landings occur to "finish off" England.<sup>44</sup>

By August 30<sup>th</sup>, Hitler "decided that the *Wehrmacht* must yield to the naval facts of the situation."<sup>45</sup> As a result, the CONOPS reduced the first wave to 9 infantry divisions and 2 armored divisions in 14 days along a narrow front. Additionally, two airborne divisions provided direct support. Under this revised plan, the total force included 23 divisions over 6 weeks. With such a decrease in landing forces, Hitler and the OKW understood that the landing "operation should only be carried out now as a *coup de grace*."<sup>46</sup> Furthermore, the *Luftwaffe* determined not only the success of the operation, but whether the landing would even be attempted. Consequently, when the *Luftwaffe* failed to achieve air supremacy, Hitler cancelled the invasion. By the time the cancellation occurred, the *Wehrmacht* had completed preparations, training, and rehearsals for an invasion force consisting of 9 infantry divisions, 2 armored divisions, and 250 amphibian tanks.<sup>47</sup>

After an analysis of unrestricted warfare and Germany's A2AD problem, the final piece to this battle space involves the relationship between ethnic ties and strategic end states. Hitler had always "dreamt of ruling the world together with the 'Germanic brother nation' across the Channel. Next to Italy, he considered England to be the only possible ally in Europe."<sup>48</sup> Hitler saw the British as part of the Germanic *Herrenvolk* [master race]. Furthermore, he did not dream of occupying the British Isles because he preferred "his great objective of *Lebensraum* in the east."<sup>49</sup>

These core beliefs, coupled with the devastating nature of unrestricted warfare and the A2AD problem, created a muddled strategy caught between two end states. One end state called for eliminating England as a base of operations against Germany. In contrast, the other end state required capitulation.<sup>50</sup> Hitler's waffling between two distinct end states prevented Operation SEALION's CONOPS from defining progress. One day, progress required the destruction of the Fighter Command. The next day, progress required signs of British capitulation.<sup>51</sup> This caused confusion within the *Luftwaffe* and contributed to Goering's disjointed air campaign.<sup>52</sup> Muted by *Fuhrerprinzip*, the OKW failed to shape a coherent strategy and CONOPS around a single desired end state. This failure denied Hitler a quick victory in 1940 and provided England breathing space in 1941 while Germany looked to invade the Soviet Union.

#### A Chinese Perspective on Strategy, Unrestricted Warfare, A2AD Problems, and Ethnic Brotherhood

Since the ceasefire of the Korean War, relations between China and the US have experienced strenuous periods, most notably in a series of three Taiwan-straits Crises. Unfortunately, potential triggers for war between China and the US do not limit themselves to disputes over Taiwan. Current scholarship cites North Korea, the South China Sea, Japan, and India as actors or areas which contribute to the security dilemma.<sup>53</sup> In the last decade, the Communist Part of China's (CPC) securing of core national interests has led to domestic stability. Continued stability will enable the CPC to settle territorial disputes over a timeline spanning decades, not years. While this decreases the chances of a near-term war with the US

over Taiwan, China still seeks to deter US military reaction to Chinese aggression with an existential threat.<sup>54</sup>

An examination of Chinese strategic culture contextualizes China's past, present, and future. Chinese strategic culture answers three questions about the role of war in human affairs, the nature of the adversary, and the efficacy of military force and applied violence.<sup>55</sup> The answers to these questions make up a central strategic paradigm.<sup>56</sup> From his analysis of *The Seven Military Classics of Ancient China*, Alastair Iain Johnston concludes that China's central strategic paradigm recognizes war as a constant tool in interstate affairs, the disposition of the adversary as the determinant if a security threat exists, and force as legitimate, necessary, and not bounded by moral limits.<sup>57</sup> Furthermore, a "grand-strategic preference ranking" system develops and takes into account conflicting ideals from the Confucian-Mencian Paradigm which promotes minimal violence. Although a complex ranking system, it contains consistencies with the western traditions of the Parabellum Paradigm in which "if you want peace, you must prepare for war."<sup>58</sup>

Consequently, while China may not look to start an immediate war with the US, China values the utility of warfare, conducts total war, and uses defense as a preparatory action to offense.<sup>59</sup> Sun-tzu set the priorities of war when he wrote: "What is of supreme importance in war is to attack the enemy's strategy. Next best is to disrupt his alliances. The next best is to attack his army."<sup>60</sup> Out of this philosophy, China's strategic culture has expanded beyond Germany's disjointed military-centric strategy against Britain. Even so, China shares similar perspectives in unrestricted warfare, A2AD challenges, and the relationship between ethnic ties and strategic end states.

While Germany's unrestricted warfare limited itself to advances in air power and undersea warfare, China's unrestricted warfare takes on a new shape. Contemporary Chinese

military leaders “argue that the laws of Western warfare, the definition of the battle space, and much of the international system established since the Second World War promote the status quo— that is, US superiority in traditional warfare and its political dominance in global affairs. The solution to this military, and ultimately political, log jam for Beijing is not to play the US game.”<sup>61</sup> Consequently, China’s unrestricted warfare uses a series of stratagems to cause chaos throughout the battle space and US society.<sup>62</sup> It uses “all means, including armed force or non-armed force, military and nonmilitary, lethal and non-lethal means to compel the enemy to accept one’s interests.”<sup>63</sup>

China’s unrestricted warfare uses new methods to employ the same components: strategic isolation, economic warfare, network warfare, and terrorism. In terms of strategic isolation, China understands that the US benefits tremendously from a network of alliances based on political, economic, or military interests. Legitimacy to US military actions constitutes the most significant product of the US alliance system.<sup>64</sup> According to Qiao Laing’s and Wang Xiangsui’s *Unrestricted Warfare: China’s Master Plan to Destroy America*, technological integration and economic globalization has enabled alliances to form “overnight” and last only temporarily.<sup>65</sup> China can use this new alliance system. China’s efforts to secure resources for its economy can translate into political and military partnerships. This can lead to an A2AD Threat against the US that expands beyond the military centric definition of A2AD. China, currently enamored with the ideals of Alfred Thayer Mahan, will strategically isolate the US from Asia simultaneously through diplomatic, economic, and military means.<sup>66</sup> This will evolve into a diplomatic contest. The US will attempt to strengthen bilateral relations and its centrality in Asian multilateralism. Meanwhile, China will attempt to reorganize multilateral institutions and disrupt US alliances.<sup>67</sup>

China will look to shape the battle space in the Pacific such that it delegitimizes any US military reaction to Chinese expansion.

Economic warfare constitutes the next component in China's unrestricted warfare against the US. In *Unrestricted Warfare*, "war has realigned the relationship of weapons to war while the appearance of weapons, particularly new concepts of weapons, has gradually blurred the face of war."<sup>68</sup> The US, with economic sanctions imposed on various nations over the years, has provided China with a model on how to conduct a trade and financial war. According to a first ever Pentagon assessment, "China's holdings of more than \$1 trillion in U.S. debt and the prospect that it might 'suddenly and significantly' withdraw funds does not pose a national security threat."<sup>69</sup> Furthermore, "attempting to use U.S. Treasury securities as a coercive tool would have limited effect and likely would do more harm to China than to the United States."<sup>70</sup> With that said, these judgments fail to appreciate how a Chinese attack on the economy can act as one of many stratagems nested in a grand strategy. An economic attack on the US used in conjunction with other elements of unrestricted warfare can have the cumulative effect of inhibiting US military reaction in the region. China views financial warfare as a "hyper-strategic weapon" that maintains a high level of covertness and destructiveness.<sup>71</sup>

Network warfare provides the third component to Chinese unrestricted warfare. *Unrestricted Warfare* describes network warfare as "venturing out in secret and concealing one's identity and is virtually impossible to guard against."<sup>72</sup> Specializing in computer network hacking commonly referred to as cyber-attacks, they steal, destroy, and corrupt data. In today's computer age, these attacks threaten every sector of modern society and can cause paralysis which leads to terror in the civilian population. Current US academia acknowledges how the cyber threat represents "an enemy without boundaries."<sup>73</sup> In 2012, China's government carried

out several cyber attacks against government and private sector computers in the US. It has emerged as the most significant threat in cyberspace, according to the U.S.-China Economic and Security Review Commission.<sup>74</sup> Additionally, the report described Chinese cyber attack capabilities as “improving significantly.”<sup>75</sup>

Terrorism comprises the final component to Chinese unrestricted warfare. According to *Unrestricted Warfare*, terrorist operations directed against networks and the media target humanity as a whole and constitute a new terror war.<sup>76</sup> This new form of terrorism “would have devastating effects. The US depends more heavily on network-centric systems – military, economic, personal – than do most other countries.”<sup>77</sup> Additionally, Chinese terrorist operations will focus on “various types of new, high technologies that possibly will evolve into new super-weapons.”<sup>78</sup>

In comparing China’s A2AD problem to that of Germany’s in 1940, the analysis centers around a war that break out between the US and China in the next 5 years. This would mean that China has not completed modernization of its military. Consequently in an invasion of Taiwan, China would deal with the same challenges that faced Germany: a lack of air and naval supremacy. In addition, China would look to use the Chinese Air Force (PLAAF) to establish air supremacy over the Taiwan Straits and work with the Chinese Navy (PLAN) to neutralize US naval supremacy. In essence, this would become China’s attempt to make their version of Operation SEALION work.

In the air domain, China’s A2AD problem resembles that of Germany’s A2AD problem against Britain. Like Goering’s *Luftwaffe* in the years running up to World War II, the PLAAF currently receives a tremendous amount of resources to accelerate modernization and expand capabilities. Consequently, Chinese military strategy, as did German military strategy, holds air

supremacy as an operational imperative. Just as the *Luftwaffe* determined the success of Operation SEALION, the PLAAF's control of the air over the Taiwan Strait will form the main prerequisite for an invasion of Taiwan.<sup>79</sup> The PLAAF trains to the following air operations: offensive air, defensive air, air blockade, joint-air strike, and airborne.<sup>80</sup> While Western observers conclude the PLAAF will not complete comprehensive force modernization until 2017, the increased threat of Taiwan independence has accelerated Chinese modernization.<sup>81</sup> Furthermore, the Chinese perception that the US would defend Taiwan has fueled modernization efforts.<sup>82</sup>

Like Germany in 1940, China has focused on air and land power rather than sea power. China has only recently begun laying the foundation to re-emerge as a sea power. Consequently, the Chinese Navy (PLAN) currently maintains limited capabilities to project power in Asia and the Pacific. With that said, China has given the PLAN "an important role in a joint strategic mission to keep the most disruptive element of US power at bay long enough for [an invasion of Taiwan] to be effective."<sup>83</sup> In a campaign to invade Taiwan, the PLAN will transport the PLA across the Taiwan Strait after the PLAAF establishes air superiority. Additionally, the PLAN will attempt to neutralize Taiwan's relatively small Navy "either at sea or by sealing it within its naval bases by mining the entrances."<sup>84</sup> To accomplish these missions, the PLAN maintains a growing fleet of modern surface combatants, submarines, and small, specially-designed amphibious warships.<sup>85</sup>

In the land domain, China's A2AD problem also holds a likeness to Germany's use of the *Wehrmacht*. Like Germany's amphibious invasion of England, a Chinese invasion will "finish off" Taiwan. The PLAN's and PLAAF's ability to gain naval and air supremacy will constitute pre-requisites for any amphibious invasion. On the other hand, in contrast to Germany's hastily



planned operation, the PLA has focused on invasion plans of Taiwan for decades. A core mission set of the PLA includes: “forces capable of conducting amphibious and airborne / airmobile operations against Taiwan.”<sup>86</sup> This offensive mission set falls under China’s military strategy of active defense, which “requires offensive capabilities to keep attackers away from China’s political and economic centers of gravity.”<sup>87</sup> Although the modernization process of the PLA is ongoing, their doctrine focuses on integrated joint warfare conducting offensive operations.<sup>88</sup> China already maintains the capability to militarily “reach out and touch” Taiwan.<sup>89</sup>

After an analysis of unrestricted warfare and the A2AD problem, the final piece to this battle space involves the relationship between Chinese ethnic ties with Taiwan and strategic end states. Similar to Hitler’s feeling of ethnic brotherhood towards Britain, some groups in China support a peaceful unification process between China and Taiwan on the belief “Chinese should not fight Chinese.”<sup>90</sup> In contrast, other groups in China grow an increasingly “hawkish” form of nationalism, along with anti-US and anti-Japanese sentiment. This pressures China “to turn a malevolent eye toward Taiwan.”<sup>91</sup> In a broader context, China desires “one-China”, to include Taiwan, which commands regional dominance and global prominence.

Chinese military ends states remain clear: achieve air superiority and conduct an amphibious operation that maintains a defensible foothold on Taiwan. These operations will precipitate the surrender or evacuation of the Taipei government.<sup>92</sup> Unfortunately for the PLA, PLAAF, and PLAN, decisions regarding any invasion will not occur without the involvement of the CPC. Consequently, China faces the same dilemma in constructing strategies, operations, and tactics against Taiwan as Germany faced against Britain. Unfortunately for Germany, Hitler’s waffling between two different end states meant the failure of Operation SEALION. China will have to formulate and remain committed to a single strategic end state in order to

avoid a similar military disaster. Regardless of the strategy China chooses to use against Taiwan, the desire for a quick victory will remain. An expedient victory will empower China and enable it to shape a campaign's narrative that legitimizes their "active defense strategy." It will also position the Chinese military to replace the US as the premier force projecting power in the Western Pacific.

### Air Sea Battle: A Concept Paired With the Right Historical Case Study

The 1940 battle space between Germany and Britain provide warfighters with the right context to understand crucial themes in *Air Sea Battle*: high tempo operations in a congested battle space. Mental images of what transpired in the skies over Britain underline *Air Sea Battle*'s predictions of Chinese large-scale offensive operations: First the Chinese will "seek to render US and allied forces deaf, dumb, and blind. Second, attacks will destroy US and Japanese air and naval bases and warships operating within 1500 nm of the Chinese coast. Finally, China will interdict US and allied sea lines of communication (SLOCs) throughout Southeast Asia and the Western Pacific."<sup>93</sup>

The aforementioned analyses of strategy, unrestricted warfare, A2AD problems, and ethnic brotherhood illustrate how Germany's battle space against Britain provides warfighters a valuable case study to understand China's perspective on these issues. Second, it provides warfighters a more accurate historical context to understanding why *Air Battle*'s design went the direction it did. This examination reinforces just how significant a role history plays in operational design. Case studies not only start the creative process to understand the problem; they also provide a frame of reference for outsiders to understand a finished operational plan.

Designers and planners must pick case studies carefully in each instance. This examination shows that while War Plan Orange helped start the design process, Germany's failed invasion provides the best case study to communicate the final plan.

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<sup>1</sup> Richard Swain, *Fundamentals of Operational Design* (Washington DC: Booz Allen Hamilton), 2009.

<sup>2</sup> Joint Publication 3-0, *Joint Operations* (17 September 2006: Incorporating Change 1, 13 February 2008), IV-2.

<sup>3</sup> Swain, 18.

<sup>4</sup> Liddell Hart, *Why Don't We Learn from History* (London: George Allen & Unwin, 1946), 7-8.

<sup>5</sup> Chris, Yeazel, "China is Weakening America's Power Projection in the Pacific." *Business Insider*, (April, 2013).

<sup>6</sup> Jan Van Tol, *AirSea Battle: A Point of Departure Operational Concept*. (Washington, DC: Center for Strategic and Budgetary Assessments, 2010), xi.

<sup>7</sup> Van Tol, xi, 28, 31, 51-52.

<sup>8</sup> Van Tol, xii, 29-30.

<sup>9</sup> Van Tol, xiii.

<sup>10</sup> Van Tol, 30.

<sup>11</sup> Edward S. Miller, *War Plan Orange: The U.S. Strategy to Defeat Japan, 1897-1945* (Annapolis: Naval Institute Press, 1991).

<sup>12</sup> Van Tol, 13.

<sup>13</sup> Yeazel.

<sup>14</sup> Swain, 2.

<sup>15</sup> Paul Kennedy, ed. *Grand Strategies in War and Peace*. (New Haven and London: Yale University Press, 1991) 119.

<sup>16</sup> Kennedy, 1.

<sup>17</sup> "Between the Munich conference and the launching of Operation Barbarossa, most of the senior officers were able to justify themselves as doing things they and their predecessors had always done. They were prepared to fight and win wars quickly, with the nation's vital energies focused through the military system and under its control." Germany's strategy required total war for limited aims in order to avoid protracted wars on multiple fronts which out-stretched resources and manpower. Kennedy, 120, 121.

<sup>18</sup> "They served a regime whose ideology based domestic and foreign policies denied the dualism of the Prussian / German army's historic approach to warfare." Kennedy, 121.

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<sup>19</sup> Kennedy, 106.

<sup>20</sup> Kennedy, 119.

<sup>21</sup> Raeder, head of the *Kriegsmarine*, set prerequisites for the operation to include the elimination of RAF, Royal Navy, and British submarine actions against the German landing force. Brauchitsch, head of the *Wehrmacht*, listed landing force requirements which far exceeded the capacity of the *Kriegsmarine* and placed a monumental task burden on the *Luftwaffe*.

<sup>22</sup> Goering responded “a combined operation having the objective of landing in England must be rejected.” Wheatley, 13.

<sup>23</sup> Concept of Operations is defined as a verbal or graphic statement that clearly and concisely expresses what the joint force commander intends to accomplish and how it will be done using available resources. Headquarters US Marine Corps, *Marine Corps Planning Process*, MCWP 5-1 (Washington, DC: US Marine Corps, August 24, 2010), Glossary-4.

<sup>24</sup> Fleming, 4.

<sup>25</sup> The U-Boat “Happy Time” lasted from June 1940 to February 1941. Operation SEALION’s invasion window ended by 12 October 1940. The Battle of Britain ended by 31 October 1940, the London Blitz by 21 May 1941. Shirer, William L. Shirer, *The Rise and Fall of the Third Reich: A History of Nazi Germany* (New York: Simon and Shuster, 1959) 622, 753, 719.

<sup>26</sup> Line of Operations is a logical line that connects actions on nodes and/or decisive points related in time and purpose with an objective. Headquarters US Marine Corps, *Marine Corps Planning Process*, MCWP 5-1 (Washington, DC: US Marine Corps, August 24, 2010), Glossary-6.

<sup>27</sup> Len Deighton, *Fighter: The True Story of the Battle of Britain*. (New York: HarperCollins Publishing Company, 1977), 44.

<sup>28</sup> Center of Gravity is the source of power that provides moral and physical strength, freedom of action, or will to act. Headquarters US Marine Corps, *Marine Corps Planning Process*, MCWP 5-1 (Washington, DC: US Marine Corps, August 24, 2010), Glossary-3; Fleming, 93.

<sup>29</sup> Critical Vulnerability is an aspect of a critical requirement which is deficient or vulnerable to direct or indirect attack that will create decisive or significant effects. Headquarters US Marine Corps, *Marine Corps Planning Process*, MCWP 5-1 (Washington, DC: US Marine Corps, August 24, 2010), Glossary-4.

<sup>30</sup> The spectacle of watching formations of hundreds of Luftwaffe planes made people question “Is Britain an island anymore?” “Dover is a nice little town near Germany”; The German gun batteries at Cap Gris Nez destroyed Dover and the Channel was jokingly called Germany’s autoban. Richard Collier, *Eagle Day*, (New York: Dutton, 1966) 70, 165.

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<sup>31</sup> When the threat of invasion became a reality, Britain was forced to rely on improvisation and a Home Guard mockingly called “The Broomstick Army.” The “attack from behind” British view of Germany’s tactics against the Maginot Line in France just months before the Battle of Britain made the British fear that invasions involving Ireland, Iceland, and Spain would take them by surprise. British civilians constantly reported seeing German paratroopers, spies, double agents, and dead German infantry washing up on their shores throughout the summer. British hysteria climaxed when the citizens thought the Germans were using fog pills in addition to a tunnel from France to Dover to bring the *Wehrmacht* across the Channel. Britain drew up defensive plans to use mustard gas against German soldiers on the beaches and prepared petroleum plants to try and set the coastal waters ablaze prior to an invasion attempt. Britain passed a series of political responses, including the Treason Act of 1940, which labeled the 5<sup>th</sup> Column, Irish Republican Army, the Welsh Movement, and Fascists as hostile groups against Britain. British civilians threw stones and instigated inhumane acts towards Germans and Austrians living in Britain whom were moved inland under close watch of the British Army under the Aliens Branch Home Office. Early in the battle, the children in Southern England and industrialized centers were evacuated in large numbers by train to the countryside or to Canada to escape the *Luftwaffe*’s attacks until the City of Benares was sunk carrying hundreds of children. Church services, theaters, zoos, cricket matches were continued to help British spirit. Air raid fashion filled shops and gas masks became as common an accessory as handbags for women. Finally, bomb squads and fireman became the people’s heroes. Fleming, 39, 61, 66, 81-83, 89, 93-105, 108-113, 120-121, 124-127, 172, 182, 186, 198-209, 293.

<sup>32</sup> As keepers of the last stronghold of freedom, Sir Humphrey Jennings’ “London Can Take It” and other works made each British citizen a symbol of resilience. His film “articulated a sense of national identity, under stress of wartime.” Yet, when Churchill yelled “England can take it!” during a visit to a neighborhood which had just been bombed, a woman screamed back “We’re the ones who are taking it. You are out of the way!” *Wartime Homefront: Volume IV: London Can Take It; The World At War: Volume IV: Alone-Britain.*

<sup>33</sup> Operation SEALION depended on Hitler and Goering employing the *Luftwaffe* effectively in order to succeed in the land, sea, and air domains. The *Wehrmacht* depended on *Luftwaffe* fire support during the amphibious operation. Furthermore, the *Kriegsmarine* depended on *Luftwaffe* protection from the Royal Navy. To accomplish these tasks, Hitler and Goering had to understand the strengths and weaknesses of the *Luftwaffe* and Fighter Command. Unfortunately, neither man understood the limits of airpower which resulted in the misapplication of *Luftwaffe* operations against the Royal Navy. Operation SEALION depended on the *Luftwaffe* to neutralize the Royal Navy. Goering failed to mitigate *Luftwaffe* anti-naval limitations during CONOPS development by not focusing or sustaining operations against the Royal Navy. Dividing the air campaign into three distinct phases, to include operations to gain air supremacy, neutralize the Royal Navy, and support the *Wehrmacht*, constituted Goering’s only available method to accomplish all CONOPS tasks within a tight invasion window. Moreover, sustained operations against Fighter Command airbases provided the only means available to Goering to achieve air supremacy expeditiously during the first phase of air operations. As it happened, Goering failed to phase any operations within the air campaign. To Goering, the *Luftwaffe* had no limitations. Therefore, he failed to identify any value in phasing operations to mitigate *Luftwaffe*’s capability shortfalls. Goering never conceptualized using tactical air power in three sequential phases:

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gaining German air supremacy, denying British naval supremacy, and supporting the *Wehrmacht's* invasion. Goering also did not conceptualize decision points and timelines for each phase. He did not even focus on Fighter Command airbases to achieve air supremacy. Instead, Goering floundered in a strategic air campaign that lacked focus, wasted time, and exacerbated *Luftwaffe* limitations. Wheatley, 23.

<sup>34</sup> Although the Battle of Britain brought on constant political friction between Churchill and Parliament and major tactical disagreements between top RAF commanders Hugh Dowding and Keith Park against Douglas Bader and Leigh-Mallory, Fighter Command denied the *Luftwaffe* air supremacy. Churchill did not receive public recognition by the Parliament until after the victory over the *Luftwaffe* was won. Hugh Dowding and Keith Park were proponents of intercepting the Germans quickly in small formations while Douglas Bader and Leigh-Mallory advocated a “Big Wing” tactic. Dowding and Park’s tactic preserved the RAF and therefore won the Battle of Britain. But, Dowding’s peers severely disliked his personality and Bader’s adjutant was a member of Parliament which supported the “Big Wing” since their tactic made Londoners feel more protected from the RAF. Both sides emotionally blamed the other for Fighter Command’s losses. Deighton 55-59.

<sup>35</sup> Goering believed in General Giulio Douhet’s theory that “no one can command his own sky if he does not command his adversary’s sky” Put simply, Goering and Hitler did not understand how to effectively employ bombers and fighters to gain air supremacy or bring the capitulation of England through strategic air power. Goering did not understand the difference between using tactical air power and strategic air power. For example, the *Luftwaffe* could have focused on tactical air power to gain air supremacy through fighter sweeps and bomber attacks over Fighter Command airfields. On the other hand, the *Luftwaffe* could have focused on strategic air power to bring about the systematic destruction of England. Goering planned an air campaign that looked to force Britain’s capitulation through air power alone, not through a joint operation. Although the CONOPS planned on the *Luftwaffe* assuming the main effort in the beginning of Operation SEALION, Goering failed to shape his air campaign to set up the success for follow on operations. Goering simply planned on completing tasks for Operation SEALION after air supremacy was achieved. Thus, operations against the Royal Navy and ground targets to assist the *Wehrmacht* were never planned out in detail. This failure delayed crucial decisions points and destroyed any synchronization of efforts. A decision point is defined as an event, area, or point in the battle space where and when the friendly commander will make a critical decision. Current planners articulate decision points in decision support templates which depict decision points, timelines associated with the movement of forces, and the flow of operations. Had Goering used these tools in his planning process, he could have identified incoherence not only in Operation SEALION’s CONOPS, but in Hitler’s overall strategy. On September 23<sup>rd</sup>, Major-General Warlimont reported to Hitler that *Luftwaffe* preparations failed to carry out tasks prescribed in Operation SEALION’s CONOPS. The *Luftwaffe* was supposed to plan for 2 airborne assault divisions, attacks on coastal defenses and the Royal Navy, and close-air support operations by *Luftflotte* 2 and 3. Goering summed up his lack of support for the amphibious operation by stating “SEALION is neither to disturb nor encumber the operations of the *Luftwaffe*. Deighton, 45, 228; Headquarters US Marine Corps, *Marine Corps Planning Process*, MCWP 5-1 (Washington, DC: US Marine Corps, August 24, 2010), Glossary-4; Wheatley, 56-58, 83, 120.

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<sup>36</sup>Battle of Britain Historical Society 2007 Education and Research For Students. “The Battle of Britain 1940”, <http://www.battleofbritain1940.net> (accessed 05 Oct – present).

<sup>37</sup> Battle of Britain Historical Society 2007 Education and Research For Students. “The Battle of Britain 1940”, <http://www.battleofbritain1940.net> (accessed 05 Oct – present).

<sup>38</sup> With the success or failure of Operation SEALION resting on Goering’s shoulders, the *Luftwaffe* began the Battle of Britain. From July 10<sup>th</sup> to August 7<sup>th</sup>, the *Luftwaffe* concentrated attacks on British merchant ships in the English Channel in order to assist Hitler’s strategy of defeating Britain by collapsing their economy. This period in the battle also enabled the *Luftwaffe* to entice Fighter Command into action and at a minimum, gain knowledge of their strengths and weaknesses. Unfortunately for the *Luftwaffe*, only skirmishes with Fighter Command developed. Consequently, the *Luftwaffe* changed their focus to attacking airfields, factories, and ports in order to destroy Fighter Command in the air and on the ground from August 8<sup>th</sup> to September 6<sup>th</sup>. 103 pilots were killed or missing and 128 were wounded, which represented a total wastage of 120 pilots per week out of a fighting strength of just fewer than 1,000. During August no more than 260 new RAF fighter pilots were turned out and casualties in the same month were just over 300. Three more weeks of such a pace would indeed have exhausted aircraft reserves. The CONOPS planned for *Luftwaffe* attacks on Fighter Command until September 20<sup>th</sup>, D-1. On this day, the CONOPS planned for a target switch to London. The OKW predicted the bombing of London would clog lines of communication throughout Southern England and would deny British ground forces freedom of movement during the actual invasion. Goering ordered the *Luftwaffe* to shift focus from Fighter Command’s airfields to London two weeks early on September 7<sup>th</sup>, D-15. The shift from bombing RAF airfields to attacking London occurred 2 weeks early. This denied the *Luftwaffe* critical time to destroy the RAF and complete other required tasks for the amphibious invasion. Hitler wanted retaliation on London because he believed he had lost face with the German people after the RAF attacked Berlin. Without air supremacy established over Southern England on September 11<sup>th</sup> D-10, Hitler denied the confirmation of September 21<sup>st</sup> as D-Day. He also denied the execution order for the *Kriegsmarine* to complete mine-sweeping, mine-laying, and embarkation operations. On September 17<sup>th</sup>, Hitler met with Goering and Field Marshal von Rundstedt, the commander of Army Group A. Army Group A made up the preponderance of ground forces for the invasion. From that meeting, Hitler ordered the postponement of the invasion. By September 19<sup>th</sup>, Raeder began to disperse the invasion fleet to reduce the threat of RAF night attacks on the invasion fleet. Hitler renounced the invasion for the rest of the year on October 12<sup>th</sup> because weather forecasts no longer predicting favorable conditions for sustained operations, the RAF denied air supremacy, and newly planned operations in the east requiring the reallocation of forces. With his attention clearly in the east in 1941, Hitler never again issued planning for an invasion of England. Wheatley, 94; Fleming, 278.

<sup>39</sup> The *Luftwaffe* obtained dismal results against the Royal Navy, sinking zero motor torpedo boats (MTBs) during the Battle of Britain. Deighton, 228.

<sup>40</sup> Fleming, 43.



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<sup>41</sup> The *Kriegsmarine* solidified plans to protect the west and east flanks of the landing area, execute a deception plan, and transport the *Wehrmacht* by September 23<sup>rd</sup>. Also, the *Kriegsmarine* completed preparations to commence mine-laying and mine-sweeping operations. The *Kriegsmarine* planned on using had naval screen of 10 destroyers, and 50 motorized torpedo boats (MTBs). Minefields from Calais and North Foreland to Dieppe and Beachy Head, along with patrol and minesweep flotillas, guarded the flanks of the landing area. Finally, 27 U-boats planned to attack to neutralize the threat posed by the Royal Navy. The *Kriegsmarine* constructed a deception plan to send a decoy fleet, from Norway and the Heligoland Bight to simulate landing in Scotland. Likewise, the Heavy Cruiser *Hipper* was to sail to Iceland to further complicate the Royal Navy's interdiction of the invasion. Germany devised and implemented a powerful Information Operation, which included leaflet drops, radio broadcast, and speeches to psychologically weaken British resolve. 95 percent of the barge fleet was ready for embarkation by September 19<sup>th</sup> and all preparations were complete by September 23<sup>rd</sup>. Wheatley, 83, 112, 113.

<sup>42</sup> Wheatley, 17.

<sup>43</sup> Main Effort is defined as the designated subordinate unit whose mission at a given point in time is most critical to overall mission success. It is usually weighted with the preponderance of combat power and is directed against a center of gravity through a critical vulnerability. Headquarters US Marine Corps, *Marine Corps Planning Process*, MCWP 5-1 (Washington, DC: US Marine Corps, August 24, 2010), Glossary-6.

<sup>44</sup> Hitler's directive set four conditions for the invasion to occur: 1. The RAF was to be "beaten down in its morale and in fact, that it can no longer display any appreciable aggressive force in opposition to the German crossing". 2. The English Channel was to be swept of British mines at the crossing points, and the Strait of Dover must be blocked at both ends by German mines. 3. The coastal zone between occupied France and England must be dominated by heavy artillery. 4. The Royal Navy must be sufficiently engaged in the North Sea and the Mediterranean so that it could not intervene in the crossing. British home squadrons must be damaged or destroyed by air and torpedo attacks. The CONOPS gave the *Luftwaffe* three tasks: First, establish air supremacy over the English Channel in order to protect the landing force from the Royal Navy and coastal defenses. Second, provide direct and indirect fires for the *Wehrmacht*. Third, enable an air assault to secure key locations to form a bridgehead. Next, the CONOPS gave the *Kriegsmarine* two tasks: First, block the Royal Navy from the landing area with U-Boats and mine fields. Second, construct, mobilize, and employ a barge fleet to transport the *Wehrmacht*. Finally, the CONOPS gave the *Wehrmacht* three tasks: First, secure a beachhead. Second, defeat British defensive forces. Third, lay siege to London in order to precipitate England's capitulation. On July 31<sup>st</sup>, the *Kriegsmarine* provided Hitler capability shortfalls with explanations on how they affected the CONOPS. Raeder briefed both Hitler and Brauchitsch. Meanwhile, Brauchitsch articulated to Hitler the requirements for the *Wehrmacht*. This included the size of the landing force, landing area location, and rate of replenishment and reinforcement. The *Wehrmacht* originally planned an assault using surprise, speed, and maneuver. The first wave would consist of 13 divisions in 3 days along a broad front. Following waves would bring the total invasion force to 40 divisions. At first, Hitler agreed to this figure and added "this was not just a river

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crossing, but the crossing of a sea which is dominated by the enemy.” Fleming, 4; Wheatley, 31, 34.

<sup>45</sup> Wheatley, 83.

<sup>46</sup> Wheatley, 72.

<sup>47</sup> Beginning on September 12<sup>th</sup>, the *Wehrmacht* conducted special training with the 620<sup>th</sup> engineer regiment in order to prepare the first echelon of troops for the beach terrain and embarkation and debarkation rehearsals. All final preparations were completed in order to launch the invasion on September 24<sup>th</sup>. Wheatley 113, 116.

<sup>48</sup> Egbert Kieser, *Hitler on the doorstep: Operation Sea Lion: the German plan to invade Britain, 1940*, Translated by Helmut Bogler, (Annapolis, MD: Naval Institute Press, 1997) 266-267.

<sup>49</sup> Kieser, 266-267.

<sup>50</sup> Terror bombing London made sense if the strategy simply required the demoralization of the masses. However, the systematic destruction of Fighter Command and subsequent support operations for an amphibious landing required a completely different CONOPS. Fleming, 132.

<sup>51</sup> Wheatley, 85.

<sup>52</sup> Using *Fuhrerprinzip*, Hitler decided to bomb London two weeks early which proved catastrophic to Operation SEALION. “The inference seems inescapable that Hitler’s decision to start bombing London D-15 instead of D-1 was not a military but a political decision, taken in defense of his personal position and prestige. It was an extremely unwise decision.” Meaning “leader principle” in German, *Fuhrerprinzip* means “the Fuhrer’s words are above all written law.” It compressed the planning process, caused inner-service rivalry, and destroyed the unity of command and unity of effort. Victories from 1936 to 1939 emboldened Hitler to use *Fuhrerprinzip* to dominate the OKW’s planning process. Unfortunately for the OKW, ad hoc planning and improvised solutions constituted normal characteristics of their planning process. “It was Hitler’s method not to make long-ranging plans of aggression, but to exploit with the utmost speed and ruthlessness the particular situation in which he found himself.” While this process worked sufficiently prior to and during the conquest of France, an invasion of England required specialized forces, thorough knowledge across multiple warfare domains, and unity of effort across the entire German military. Hitler remained convinced of his “dream” that Britain would seek peace. This delayed the issuance of Directive 16 to July 16<sup>th</sup>. This gave the OKW only 4 weeks to plan the operation and 10 weeks to execute the invasion. With such a short timeline, Brauchitsch, Raeder, and Goering postured themselves against each other within the *Fuhrerprinzip* framework. Each man desired to make Hitler aware of capability shortfalls in order to put pressure on another service or to gain more power for himself within the OKW and the Nazi Party. Hitler understood that Field-Marshal von Brauchitsch, head of the *Wehrmacht*, depended on both the *Luftwaffe* and the *Kriegsmarine* to enable a successful amphibious operation. Likewise, Hitler understood that Grand-Admiral Raeder, head of the *Kriegsmarine*, should focus on Surface Raider and U-Boat operations against Britain. Hitler also understood

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that Raeder needed as much time as possible to piece together a fleet of barges to transport the *Wehrmacht*, especially after the surface fleet losses suffered during the invasion of Norway. In contrast, Reich Marshall Goering, head of the *Luftwaffe*, expressed eagerness to prove what air power could accomplish alone: the capitulation of England. Acting as both the Fuhrer and Supreme Commander of the Armed Forces, Hitler made military decisions for political reasons. Hitler also elevated politics above the unity of effort amongst his service chiefs. Hitler did not wish these powerful elements of the State to work in close sympathy, and his suspicious nature would have not tolerated daily meetings of his Service representatives on the model of the British Chiefs of Staff committee. Between June and September 1940 joint discussions with his Service Chiefs only took place on 21 July and on 14 September, Goering being represented on both occasions by his Chief of Staff. Fleming, 43, 73, 278; Wheatley, 28, 37, 146.

<sup>53</sup> Charles L. Glaser, “The Security Dilemma Revisited.” *World Politics*, (October, 1997) 171; James Dobbins, David C. Gompert, David A. Shlapak and Andrew Scobell. *Conflict with China: Prospects, Consequences, and Strategies for Deterrence*, (Santa Monica, CA: RAND Corporation, 2011, [http://www.rand.org/pubs/occasional\\_papers/OP344](http://www.rand.org/pubs/occasional_papers/OP344)).

<sup>54</sup> The CPC uses foreign policy to achieve core national interests in order to maintain political dominance within China. Current Chinese core interests include “defending its fundamental systems and national security, preserving national sovereignty and unification, and maintaining the steady and sustainable development of its economy and society”. Success in these metrics provides the CPC legitimacy to rule China. Thus, the CPC takes a pragmatic approach towards foreign policy and to nationalism. It shapes foreign policy to meet core interests and promotes patriotic demonstrations to ensure that people give credit to the CPC for success. China can wait for peaceful unification, seize Taiwan when the US military over-commits its obligations and resources, or seize Taiwan after a slow, but steady decline of US military presence in the region. Two factors can disrupt the CPC’s pragmatism towards foreign policy: democratic political liberalization and not meeting core interests. In response to both cases, the CPC would focus on securing popular support over any other core interest. Some scholarship has characterized the CPC’s focus on popular support as allowing “the tail to wag the dog.” This could transform Chinese patriotism into an aggressive form of nationalism. The US could perceive this transformation in Chinese nationalism as a threat and consequently, escalate tensions with China. Domestic stability within China will remain a key determinant of the CPC’s view towards foreign policy as well as the likelihood of war with the US. Benjamin W. Moles, “China’s Nationalism and Foreign Policy: A Case for Concern or Patriot Games.” *E-International Relations*, (August, 2012).

<sup>55</sup> “This forms the central strategic paradigm of a particular strategic culture. From this paradigm should flow logically-connected strategic preferences about how to deal with threats to security.” Alastair I. Johnston, *Cultural Realism: Strategic Culture and Grand Strategy in Chinese History*, (Princeton: Princeton University Press, 1995) 73.

<sup>56</sup> Two extremes exist within the paradigm. In the first extreme sometimes called the Sun-tzu Paradigm, war is constant, conflict with an enemy tends towards zero-sum stakes, and violence is highly efficacious in dealing with conflict. In contrast, the second extreme sometimes called the

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Confucian-Mencian Paradigm, views war as aberrant, conflict tending towards non-zero sum stakes, and violence as a last resort to resolving conflict. Johnston 62.

<sup>57</sup> Johnston, 106.

<sup>58</sup> Johnston, 107.

<sup>59</sup> T'ai Kung's military classic *Six Secret Teachings* explores the concept of total war. T'ai Kung's *Six Secret Teachings* consists of political advise and tactical instructions to Kings Wen and Wu of the Chou dynasty during the 11<sup>th</sup> century b.c. Written during the warring states period, the Chou Kings fought against the vastly-superior and well-entrenched Shang dynasty. T'ai Kung's work reflects the essence of the Ch'i military study. It remains the only classic that considers strategy from the perspective of civil revolution. It also describes the perpetual nature of warfare and focuses on survival and conquering the enemy. T'ai Kung believes warfare as unavoidable. He also supports a doctrine of total warfare without constraints. He describes a sequential process: first, build a material base, second, undermine the enemy's strength, and third, create an administrative organization to rule during peace and war. This sequential process brings about the total annihilation of an adversary's society by eroding its foundation from within. In Sun-tzu's *Art of War*, defense constitutes the beginning of a sequential process. The first step includes making "yourself undefeatable in order to wait for the enemy to become defeatable." Next, the defender makes a seamless transition to the offense and attacks with enough force to avoid a protracted war. The close relationship between defense and offense exists at both the operational and strategic levels of war. In addition, the fluidity by which Sun-tzu describes the transition from defense to offense undermines the concept of static-defense. Ralph. D. Sawyer, trans., *The Seven Military Classics of Ancient China*, (New York: Basic Books, 2007) 22-33; Johnston, 141.

<sup>60</sup> Sun-tzu, *Art of War*, trans. by Samuel B. Griffith (London: Oxford University Press, 1963) 77-78.

<sup>61</sup> *Beijing's Doctrine on the Conduct of Irregular Forms of Warfare*: Hearing before the US-China Economic and Security Review Commission Panel., (Dr. Robert J. Bunker, CEO, Counter-OPFOR Corporation) 2.

<sup>62</sup> *Beijing's Doctrine on the Conduct of Irregular Forms of Warfare*: Hearing before the US-China Economic and Security Review Commission Panel., (Dr. Robert J. Bunker, CEO, Counter-OPFOR Corporation) 2.

<sup>63</sup> *Beijing's Doctrine on the Conduct of Irregular Forms of Warfare*: Hearing before the US-China Economic and Security Review Commission Panel., (Dr. Robert J. Bunker, CEO, Counter-OPFOR Corporation) 2.

<sup>64</sup> Laing and Xiangsui, 242.

<sup>65</sup> "The modern concept of "nation states" which emerged from the Peace of Westphalia in 1648 is no longer the sole representative occupying the top position in social, political, economic and

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cultural organizations. The emergence of large numbers of meta-national, trans-national, and non-national organizations, along with the inherent contradictions between one nation and another, are presenting an unprecedented challenge to national authority, national interests, and national will.” Qiao Laing and Wang Xiangsui, *Unrestricted Warfare: China’s Master Plan to Destroy America*, (Panama City: Pan American Publishing, 2002) 241.

<sup>66</sup> “PRC ‘anti-access operations’ are defined as actions taken to deny US forces from deploying to a position in theater from which they can conduct effective operations against Chinese forces. They include PRC political action to coerce regional countries into denying US forces access to operational bases, and operational attacks against existing US regional bases or forward deployed naval forces. PRC ‘area-denial operations’ are actions taken within the Pacific theater of operations to deny successfully deployed US forces an ability to conduct effective operations in the vicinity of Taiwan and the Chinese mainland.” Toshi Yoshihara and James R. Holmes, *Red Star Over the Pacific: China’s Rise and the Challenge to US Maritime Strategy*, (Annapolis: US Naval Institute Press, 2010) 6.

<sup>67</sup> Gilbert Rozman, - Chinese Strategic Thinking on Multilateral Regional Security in Northeast Asia.|| By the Reserve Officers Association, *FPRI Annual Asia Program Conference*, November, 2010. <http://www.fpri.org/docs/rozman.pdf>; Simon Sheldon, – High-Level Attention.|| *CSIS: Center For Strategic Studies and International Studies*, Comparative Connections , Part of the Pacific Forum, January 14, 2013, <http://csis.org/program/comparative-connections>.

<sup>68</sup> “War in the age of technological integration and globalization has eliminated the right of weapons to label war and, with regard to the new starting point, has realigned the relationship of weapons to war, while the appearance of weapons of new concepts, and particularly new concepts of weapons, has gradually blurred the face of war...Can using financial instruments to destroy a country's economy be seen as a battle?” Laing and Xiangsui, 44.

<sup>69</sup> “China is the second-largest holder of U.S. government debt after the Federal Reserve. Acting at the direction of Congress, the Defense Department studied the rationale behind the investments and whether “the aggressive option of a large sell-off” would give China leverage in a political or military crisis.” Tony Capaccio and Daniel Kruger. “China’s US Debt Holdings Aren’t Threat, Pentagon Says.” *Bloomberg*, Sept 10, 2012.

<sup>70</sup> “As the threat is not credible and the effect would be limited even if carried out, it does not offer China deterrence options in a diplomatic, economic or military situation, the Pentagon found.” Tony Capaccio and Daniel Kruger.

<sup>71</sup> Laing and Xiangsui, 44.

<sup>72</sup> Laing and Xiangsui, 59.

<sup>73</sup> Isaac R. Porche, Jerry M. Sollinger, Shawn McKay, “An Enemy Without Boundaries.” *Proceedings*, October, 2012.

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<sup>74</sup> “In 2012, Chinese state-sponsored actors continued to exploit government, military, industrial, and nongovernmental computer systems,” the report by the U.S.-China Economic and Security Review Commission said. “Any individual penetration remains difficult to attribute, but security researchers are increasingly able to group exploitations into campaigns based on common features and gain better insight into those responsible.” Bill Gertz. “China: No. 1 Cyber Threat.” *The Washington Free Beacon*, November 2012.

<sup>75</sup> “Irrespective of sophistication, the volume of exploitation attempts yielded enough successful breaches to make China the most threatening actor in cyberspace,” the report said. The report identified Chinese military and intelligence organizations as the most sophisticated players in the cyber warfare efforts along with quasi-official cyber militias and other organized cyber attackers such as Chinese state-run information technology and telecommunications firms. Cyber espionage is carried out mainly by Chinese intelligence organs. The commission also warned that U.S. industrial supply chains remain vulnerable to Chinese government hacking. “Many components of defense systems and telecommunications infrastructure are manufactured in China or sourced from Chinese entities,” the report said. “This yields active problems with counterfeit and substandard components and raises the potential for the introduction into critical systems of intentionally subverted components.” The advanced attack methods include defeating secure authentication, breaking into networks, and “bridging air gaps” used to protect the most sensitive classified government information or proprietary corporate data. News reports from Asia revealed that China used flash drives and other removable media to cross air-gap protected computers at India’s Eastern Naval Command. Advanced Chinese attack methods also seek to penetrate deployed military systems including missiles, aircraft, ships, and spacecraft. Chinese hackers also “have successfully penetrated cloud systems” and have compromised mobile communications devices such as smart phones, the report said. The report also said the U.S. Army Cyber Directorate in January 2007 discovered “beaconing activity” from a Chinese-owned Lenovo desktop computer. The activity was described as a “self-initiating attempt to establish” a connection to the computer. China also has been linked to malicious software planted in Chinese computers and a digital picture frame. Bill Gertz.

<sup>76</sup> Laing and Xiangsui, 48.

<sup>77</sup> Andrew T. Phillips, “The Asymmetric Nature of Cyber Warfare.” (*Proceedings*, October, 2012).

<sup>78</sup> Laing and Xiangsui, 48.

<sup>79</sup> Kamphausen and Scobell, ed., 497.

<sup>80</sup> “The PLAAF trains for three dedicated Air Force campaigns. The *offensive air campaign* employs air strikes on enemy territory to suppress or destroy enemy air defenses and to attack both strategic and campaign level targets. The *air defense campaign* seeks to establish air superiority over the war zone through several measures, including deterrence based on denial, resisting attack by targeting hostile intelligence and service platforms, and launching timely counterstrikes against enemy air bases and support assets. The *air blockade campaign* is designed to effect political coercion against the enemy via means such as air strikes that target

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ports and navigation routes. In addition, the PLAAF has major roles in two joint service campaigns: the *joint-air strike campaign* and the *airborne campaign*.” Kamphausen and Scobell, ed., 385.

<sup>81</sup> “While the PLAAF had made impressive progress towards comprehensive force modernization, most Western observers have concluded that it will require an additional 10-15 years (2017-2022) before the process is complete.” Kamphausen and Scobell, ed., 380, 470.

<sup>82</sup> China’s modern PLAAF will consist of advanced aircraft integrated into a Command, Control, Communication and Information (C<sup>3</sup>I) battle space capable of employing stand-off / smart munitions. Air operations will consist of around-the-clock large-scale air offensives, global strike / reach, over-the-horizon air combat, deep strike, and stealth penetration. Kamphausen and Scobell, ed., 380; Pillsbury, 296.

<sup>83</sup> Kamphausen and Scobell, ed., 498.

<sup>84</sup> Roy Kamphausen and Andrew Scobell, ed., *Right-Sizing the People’s Liberation Army: Exploring the Countours of China’s Military*. (Carlisle, PA: Strategic Studies Institute, 2007) 497.

<sup>85</sup> “The extensive application of information technology improves the transparency of the sea battlefield and increases the deterrence of vessels and aircraft. Such deterrence is multidirectional but much less serious to submarines, because submarines are more difficult to track.” Pillsbury, 277.

<sup>86</sup> “By roughly 2015, the Chinese likely will have a task-organized, airmobile capability, backed by heavier forces that can be inserted by air or para-dropped.” Kamphausen and Scobell, ed., 255, 272.

<sup>87</sup> “The defensive flavor has shifted, however, from traditional concepts of absorbing and depleting an attacking force to active defense, one that requires offensive capabilities to keep attackers away from China’s political and economic centers of gravity.” Kamphausen and Scobell, ed., 260.

<sup>88</sup> “While missile, air, and naval programs predominate in ‘active defense’ preparations, ground force restructuring and training in key Group Armies also illustrate a desire to build a regional power projection capability for those forces. The warfighting core of the PLA will not be a fully modernized force, however, until maneuver divisions and brigades reflect in training the capability to manage the complexities of joint offensive warfare. Over the course of the past decade, the PLA has built at least four major amphibious training bases, with about one quarter of the PLA’s maneuver divisions and brigades focusing on training for amphibious operations. Integrated joint operations is the current buzz-phrase for training, equipping, and sustaining the PLA to conduct multi-service operations in a informationized environment.” Kamphausen and Scobell, ed., 261-262, 271.

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<sup>89</sup> “The PLA’s single-minded focus on the operational problem of Taiwan has resulted in weapons and military capabilities that allow the PLA to ‘reach out and touch’ Taiwan in a way that was not possible in earlier decades.” Kamphausen and Scobell, ed., 497.

<sup>90</sup> Andrew Scobell, *China’s Use of Military Force: Beyond the Great Wall and the Long March*, (Cambridge: Cambridge University Press, 2003) 175.

<sup>91</sup> “Rising nationalism has accompanied the growth of a Chinese middle class; and the ever-increasing nationalistic impulse and its concomitant anti-US and anti-Japan flavor could drive a fragile Party to turn a malevolent eye toward Taiwan, the last major reminder of Chinese national weakness. China has been content with maintaining the status quo in the Taiwan Strait (applying of course Beijing’s definition of a ‘one-China’ status-quo), but believes that indefinite support of the current arrangement abets an American containment strategy and growth of a nationalistic Taiwan identity, thus the argument constructed by Beijing in passing the Anti-Secession Law.” Kamphausen and Scobell, ed., 252.

<sup>92</sup> Kamphausen and Scobell, ed., 498.

<sup>93</sup> Van Tol, 26-28.



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